(a) Local knowledge;
(b) Potential actions and partnership activities;
(c) Potential conditions and activities on the adjacent lands that may affect management of National Forest System lands, or vice versa; and
(d) Issues (§ 219.4).

§ 219.18 Role of advisory committees.

(a) *Advisory committees.* Advisory committees can provide an immediate, representative, and predictable structure within which public dialogue can occur and the Forest Service can develop relationships with diverse communities of interests. The responsible official may seek the assistance or advice from a committee, consistent with the requirements of the Federal Advisory Committee Act (5 U.S.C. app.) in determining whether there is a reasonable basis to propose an action to address an issue. Each Forest or Grassland Supervisor must have access to an advisory committee with knowledge of local conditions and issues, although an advisory committee is not required for each national forest or grassland. Responsible officials may request establishment of advisory committees and recommend members to the Secretary of Agriculture. Advisory committees used by other agencies may be utilized through proper agreements.

(b) *Participation in other types of community-based groups.* When appropriate, the responsible official should consider participating in community-based groups organized for a variety of public purposes, particularly those groups organized to develop landscape goals (§ 219.12(b)).

Ecological, Social, and Economic Sustainability

§ 219.19 Ecological, social, and economic sustainability.

Sustainability, composed of interdependent ecological, social, and economic elements, embodies the Multiple-Use Sustained-Yield Act of 1960 (16 U.S.C. 528 *et seq.*) without impairment to the productivity of the land and is the overall goal of management of the National Forest System. The first priority for stewardship of the national forests and grasslands is to maintain or restore ecological sustainability to provide a sustainable flow of uses, values, products, and services from these lands.

§ 219.20 Ecological sustainability.

To achieve ecological sustainability, the responsible official must ensure that plans provide for maintenance or restoration of ecosystems at appropriate spatial and temporal scales determined by the responsible official.

(a) *Ecological information and analyses.* Ecosystem diversity and species diversity are components of ecological sustainability. The planning process must include the development and analysis of information regarding these components at a variety of spatial and temporal scales. These scales include geographic areas such as bioregions and watersheds, scales of biological organization such as communities and species, and scales of time ranging from months to centuries. Information and analyses regarding the components of ecological sustainability may be identified, obtained, or developed through a variety of methods, including broad-scale assessments and local analyses (§ 219.5), and monitoring results (§ 219.11). For plan revisions, and to the extent the responsible official considers appropriate for plan amendments or site-specific decisions, the responsible official must develop or supplement the following information and analyses related to ecosystem and species diversity:

(1) *Characteristics of ecosystem and species diversity.* Characteristics of ecosystem and species diversity must be identified for assessing and monitoring ecological sustainability. In general, these identified characteristics should be consistent at various scales of analyses.

(i) *Ecosystem diversity.* Characteristics of ecosystem diversity include, but are not limited to:

(A) *Major vegetation types.* The composition, distribution, and abundance of the major vegetation types and successional stages of forest and grassland systems; the prevalence of invasive or noxious plant or animal species.

(B) *Water resources.* The diversity, abundance, and distribution of aquatic and riparian systems including

streams, stream banks, coastal waters, estuaries, groundwater, lakes, wetlands, shorelines, riparian areas, and floodplains; stream channel morphology and condition, and flow regimes.

(C) *Soil resources.* Soil productivity; physical, chemical and biological properties; soil loss; and compaction.

(D) *Air resources.* Air quality, visibility, and other air resource values.

(E) *Focal species.* Focal species that provide insights to the larger ecological systems with which they are associated.

(ii) *Species diversity.* Characteristics of species diversity include, but are not limited to, the number, distribution, and geographic ranges of plant and animal species, including focal species and species-at-risk that serve as surrogate measures of species diversity. Species-at-risk and focal species must be identified for the plan area.

(2) *Evaluation of ecological sustainability.* Evaluations of ecological sustainability must be conducted at the scope and scale determined by the responsible official to be appropriate to the planning decision. These evaluations must describe the current status of ecosystem diversity and species diversity, risks to ecological sustainability, cumulative effects of human and natural disturbances, and the contribution of National Forest System lands to the ecological sustainability of all lands within the area of analysis.

(i) *Evaluation of ecosystem diversity.* Evaluations of ecosystem diversity must include, as appropriate, the following:

(A) Information about focal species that provide insights to the integrity of the larger ecological system to which they belong.

(B) A description of the biological and physical properties of the ecosystem using the characteristics identified in paragraph (a)(1)(i) of this section.

(C) A description of the principal ecological processes occurring at the spatial and temporal scales that influence the characteristic structure and composition of ecosystems in the assessment or analysis area. These descriptions must include the distribution, intensity, frequency, and magnitude of natural disturbance regimes of the current climatic period, and should include other ecological processes important to ecological sustainability, such as nutrient cycling, migration, dispersal, food web dynamics, water flows, and the identification of the risks to maintaining these processes. These descriptions may also include an evaluation of the feasibility of maintaining natural ecological processes as a tool to contribute to ecological sustainability.

(D) A description of the effects of human activities on ecosystem diversity. These descriptions must distinguish activities that had an integral role in the landscape's ecosystem diversity for a long period of time from activities that are of a type, size, or rate that were not typical of disturbances under which native plant and animal species and ecosystems developed.

(E) An estimation of the range of variability of the characteristics of ecosystem diversity, identified in paragraph (a)(l)(i) of this section, that would be expected under the natural disturbance regimes of the current climatic period. The current values of these characteristics should be compared to the expected range of variability to develop insights about the current status of ecosystem diversity.

(F) An evaluation of the effects of air quality on ecological systems including water.

(G) An estimation of current and foreseeable future Forest Service consumptive and non-consumptive water uses and the quantity and quality of water needed to support those uses and contribute to ecological sustainability.

(H) An identification of reference landscapes to provide for evaluation of the effects of actions.

(ii) *Evaluations of species diversity.* Evaluations of species diversity must include, as appropriate, assessments of the risks to species viability and the identification of ecological conditions needed to maintain species viability over time based on the following:

(A) The viability of each species listed under the Endangered Species Act as threatened, endangered, candidate, and proposed species must be assessed.

Individual species assessments must be used for these species.

(B) For all other species, including other species-at-risk and those species for which there is little information, a variety of approaches may be used, including individual species assessments and assessments of focal species or other indicators used as surrogates in the evaluation of ecological conditions needed to maintain species viability.

(C) Except as provided in paragraph (a)(2)(ii)(A) of this section, for species groups that contain many species, assessments of functional, taxonomic, or habitat groups rather than individual species may be appropriate.

(D) In analyzing viability, the extent of information available about species, their habitats, the dynamic nature of ecosystems and the ecological conditions needed to support them must be identified. Species assessments may rely on general conservation principles and expert opinion. When detailed information on species habitat relationships, demographics, genetics, and risk factors is available, that information should be considered.

(b) *Plan decisions.* When making plan decisions that will affect ecological sustainability, the responsible official must use the information developed under paragraph (a) of this section. The following requirements must apply at the spatial and temporal scales that the responsible official determines to be appropriate to the plan decision:

(1) *Ecosystem diversity.* Plan decisions affecting ecosystem diversity must provide for maintenance or restoration of the characteristics of ecosystem composition and structure within the range of variability that would be expected to occur under natural disturbance regimes of the current climatic period in accordance with paragraphs (b)(1)(i) through (v) of this section.

(i) Except as provided in paragraph (b)(1)(iv) of this section, in situations where ecosystem composition and structure are currently within the expected range of variability, plan decisions must maintain the composition and structure within the range.

(ii) Except as provided in paragraph (b)(1)(v) of this section, where current ecosystem composition and structure are outside the expected range of variability, plan decisions must provide for measurable progress toward ecological conditions within the expected range of variability.

(iii) Where the range of variability cannot be practicably defined, plan decisions must provide for measurable progress toward maintaining or restoring ecosystem diversity. The responsible official must use independently peer-reviewed scientific methods other than the expected range of variability to maintain or restore ecosystem diversity. The scientific basis for such alternative methods must be documented in accordance with (§§ 219.22–219.25).

(iv) Where the responsible official determines that ecological conditions are within the expected range of variability and that maintaining ecosystem composition and structure within that range is ecologically, socially or economically unacceptable, plan decisions may provide for ecosystem composition and structure outside the expected range of variability. In such circumstances, the responsible official must use independently peer-reviewed scientific methods other than the expected range of variability to provide for the maintenance or restoration of ecosystem diversity. The scientific basis for such alternative methods must be documented in accordance with (§§ 219.22–219.25).

(v) Where the responsible official determines that ecological conditions are outside the expected range of variability and that it is not practicable to make measurable progress toward conditions within the expected range of variability, or that restoration would result in conditions that are ecologically, socially or economically unacceptable, plan decisions may provide for ecosystem composition and structure outside the expected range of variability. In such circumstances, the responsible official must use independently peer-reviewed scientific methods other than the expected range of variability to provide for the maintenance or restoration of ecosystem diversity. The scientific basis for such alternative methods must be documented (§§ 219.22–219.25).

(2) *Species diversity.* (i) Plan decisions affecting species diversity must provide for ecological conditions that the

responsible official determines provide a high likelihood that those conditions are capable of supporting over time the viability of native and desired non-native species well distributed throughout their ranges within the plan area, except as provided in paragraphs (b)(2)(ii)–(iv) of this section. Methods described in paragraph (a)(2)(ii) of this section may be used to make the determinations of ecological conditions needed to maintain viability. A species is well distributed when individuals can interact with each other in the portion of the species range that occurs within the plan area. When a plan area occupies the entire range of a species, these decisions must provide for ecological conditions capable of supporting viability of the species and its component populations throughout that range. When a plan area encompasses one or more naturally disjunct and self-sustaining populations of a species, these decisions must provide ecological conditions capable of supporting over time viability of each population. When a plan area encompasses only a part of a population, these decisions must provide ecological conditions capable of supporting viability of that population well distributed throughout its range within the plan area.

(ii) When conditions outside the authority of the agency prevent the agency from providing ecological conditions that provide a high likelihood of supporting over time the viability of native and desired non-native species well distributed throughout their ranges within the plan area, plan decisions must provide for ecological conditions well distributed throughout the species range within the plan area to contribute to viability of that species.

(iii) Where species are inherently rare or not naturally well distributed in the plan area, plan decisions should not contribute to the extirpation of the species from the plan area and must provide for ecological conditions to maintain these species considering their natural distribution and abundance.

(iv) Where environmental conditions needed to support a species have been so degraded that it is technically infeasible to restore ecological conditions that would provide a high likelihood of supporting viability, plan decisions must provide for ecological conditions to contribute to supporting over time viability to the degree practicable.

(3) *Federally listed threatened and endangered species.* (i) Plan decisions must provide for implementing actions in conservation agreements with the U.S. Fish and Wildlife Service or the National Marine Fisheries Service that provide a basis for not needing to list a species. In some situations, conditions or events beyond the control or authority of the agency may limit the Forest Service's ability to prevent the need for federal listing. Plan decisions should reflect the unique opportunities that National Forest System lands provide to contribute to recovery of listed species.

(ii) Plan decisions involving species listed under the Endangered Species Act must include, at the scale determined by the responsible official to be appropriate to the plan decision, reasonable and prudent measures and associated terms and conditions contained in final biological opinions issued under 50 CFR part 402. The plan decision documents must provide a rationale for adoption or rejection of discretionary conservation recommendations contained in final biological opinions.

§ 219.21 Social and economic sustainability.

To contribute to economic and social sustainability, the responsible official involves interested and affected people in planning for National Forest System lands (§§ 219.12–219.18), provides for the development and consideration of relevant social and economic information and analyses, and a range of uses, values, products, and services.

(a) *Social and economic information and analyses.* To understand the contribution national forests and grasslands make to the economic and social sustainability of local communities, regions, and the nation, the planning process must include the analysis of economic and social information at